

**Specific Broad Agency Announcement (BAA)/Funding Opportunity
Announcement (FOA) Evaluation Form and 10 U.S.C. § 2358 Decision
Memorandum (As Applicable)**

BAA/FOA Number: N00014-22-S-F006

Required for Successful and Unsuccessful Proposals

Vendor: Dr. Yongcan Cao, University of Texas, San Antonio (UTSA)

Grant Proposal #: Grant # 13755549

Check appropriate rating based on the following three criteria. Please note that comments of substance are requested. They will be used to substantiate decisions.

The primary basis for selecting proposals for acceptance will be (1) technical, (2) importance to agency programs, and (3) fund availability. Cost realism and reasonableness will also be considered when selecting proposals.

The evaluation criteria 1, 2, and 3 are equally important.

1. Overall scientific and technical merits of the proposal and responsiveness to the topic, i.e., the degree of innovation, soundness of technical concept, Applicant's awareness of the state of the art and understanding of the scope of the problem, significance and originality of the technical approach and effort needed to address/solve the problem, and anticipated scientific impact within the field. The following areas will also be considered:
 - a. the Applicant's capabilities, related experience, facilities, techniques or unique combinations of these which are integral factors for achieving the proposal objectives, and
 - b. the qualifications, capabilities and experience of the proposed Principal Investigator (PI), team leader and key personnel who are critical to achieving the proposal objectives

Comments: This is a strong proposal. The objective of the proposed project is to develop a novel active learning approach to achieve an inclusive and diverse workforce, with a focus on skills related to the high priority DoD technologies of autonomy and artificial intelligence. The approach integrates student-oriented hands-on learning, problem-based learning, and human teaming effectiveness skill development. Within the broad focus on autonomy and AI, the more specific skills to be developed in the program include 3D printing, programming/software, human-computer interface development, and data science. The approach has several attractive features: First, it involves active, hands-on training and education, rather than just classroom instruction. Second, it consists of a hierarchy of mentoring, from grad student to undergraduates, and from undergraduates to high school students: the mentoring will serve a role-model function and in addition will help mentors strengthen their understanding, as happens when one must teach concepts to others. Third, it is built on an attractive curriculum, which contains essential elements that will develop a skill set of marketable technical and leadership skills. Fourth, it focuses on training, not just of STEM subject matter; it also features training on teaming, leadership and technical presentation skills, all of which further enhance the marketability of students coming out of the program. An important part of the proposal is that it will leverage funding from several other sources, including ARO, ARL, the UTSA undergraduate research office. In addition, the approach includes student internships in industry and Navy labs. Strengthening this feature of the proposed program is the fact that students from the PI's current pilot program have already obtained such internships. A well-

conceived evaluation approach is laid out in the proposal, including assessment of student technical mastery, the number of students attracted to the program, internships obtained and successfully carried out, and published papers and inventions created.

The PI, Professor Cao, is well-qualified to lead the proposed effort: he has already successfully developed and implemented a pilot version of the proposed program, leading to internships for a number of his students in industry and in Navy Laboratories. The institution, UTSA, has already demonstrated the commitment, experience and facilities to support the proposed effort.

2. Potential Naval relevance (i.e. interest) and contribution to the ONR and Department of Navy mission.

Comments: The potential Naval (and DoD) relevance of the proposed work is demonstrated by the facts that the Army (ARO and ARL) is already providing partial support for the program, the program focus—autonomy and AI—is an increasingly high military technical priority. Additionally, naval laboratories are already providing internships for students coming out of a pilot program under the PI's leadership. The program carries the potential to motivate and equip a diverse range of students, with advanced training, to contribute significantly to this vital military technical area. This agenda accords well with the Naval priorities laid out in the 2022 Chief of Naval Operations Navigation Plan, which prioritizes the development of a more inclusive and diverse workforce.

3. Potential contribution to advance STEM education, outreach and workforce opportunities.

Comments: The proposed program is all about advancing STEM education across a diverse student population, outreaching to student populations not well-served in the STEM domain, and providing workforce opportunities, both in skill-building internships and in subsequent training and employment.

Recommend selection of proposal:

[X] Yes *My signature below indicates that my review is within my area of responsibility at the ONR.*

[] No, *provide explanation.*

- ☐ Duplication of effort; already funded.
- ☐ No longer investing in this topic.
- ☐ Lack of acceptable performance on prior efforts.
- ☐ Return on Investment (ROI) is not competitive compared to other proposals.
- ☐ Other. Explain:

2/8/2023

X Natalie Steinhauser

Ms. Natalie Steinhauser

Signed by: STEINHAUSER.NATALIE.BROOKE.1285713834

13 December 2022

Printed Name

Signature
(Digital Signature Acceptable)

Date

IF PROPOSAL IS SELECTED COMPLETE THE PROGRAM OFFICE GRANT PROPOSAL CHECKLIST

June 2022

PROGRAM OFFICE GRANT PROPOSAL CHECKLIST

PPS/MM Shopping Cart Number/Procurement Request Number: 1000017758
 Vendor Name: University of Texas at San Antonio S&T Code ONR 341
 S&T POC/Phone Number Natalie Steinhauser/ 571-334-3745
 Alternate S&T POC/Phone Number Chris Becker / 571-239-2868

ITEM	INCLUDED
1. Program Officer evaluated technical/cost proposal in accordance with the BAA/FOA and is uploaded in PPS.	Yes <u>X</u> No <u> </u>
2. Is grant for a conference/workshop/symposium? Conference/workshop/symposium should not be for an ONR, Navy or DoD event? a. Are there other non-DoD sponsors of the event? b. Does the request include funds to pay for food or beverages?	Yes <u> </u> No <u>X</u> <u>N/A</u> <u>N/A</u>
3. Technical Proposal contains detailed description of effort to be performed and the <u>proposal does not include</u> : data right assertions, deliverables (other than reports), classified work, ITAR and export controls, or profit/fee for prime.	Yes <u>X</u>
4. Cost Proposal includes Budget Justification for: <ul style="list-style-type: none"> • Direct labor (labor category, est. effort/time, salary) • Indirect rates & cost • Equipment (itemized w/associated cost, item over \$5K, provide basis of estimate and vendor quote or contact information) • Travel: provide destinations, purpose, duration, # of travelers, and basis of estimate (i.e., past experience, forecast, etc.) • Other Direct Costs (ODCs) such as: Consultants with loaded hourly or daily rate, materials w/description, publications, tuition, etc. 	Yes <u>X</u>
5. Are options proposed? If yes, base & option tasks, and budget must be defined in the proposal.	Yes <u> </u> No <u>X</u>
6. Sub-recipients: a. Costs are a separate line item (not included under direct labor), and shall submit a detailed cost proposal along with a budget justification. b. When a Federal Agency acts as a sub-recipient, do not include funding in proposed budget. Send funding directly to Agency via a MIPR. (Contact Code 08/Financial Management)	Yes <u> </u> No <u> </u> <u>N/A</u>
7. Is Animal, Human Subject Research, or rDNA research proposed? If YES: All efforts that involve human, animal, or rDNA research must go to Suzanne May/Code 34 for approval. (Proposal package will not be accepted by Code 25 until all required documentation has been received and approved.)	Yes <u> </u> No <u>X</u>
8. Is this proposal funded with non-ONR funding? Include original funding document as PPS SC attachment.	Yes <u> </u> No <u>X</u>
9. Is Government Furnished Property (GFP) proposed and is it to be used in this award? If yes, Program Office should indicate availability of the GFP in this block:	Yes <u> </u> No <u>X</u>
10. Does the nature of the work involve the procurement or operation of manned or unmanned aircraft?	Yes <u> </u> No <u>X</u>

If yes, contact Mike Meyers (michael.j.meyers52.civ@us.navy.mil) and Timothy Devin (timothy.j.devin.ctr@us.navy.mil) documentation of the discussion.	
11. Does the effort involve activities with China? (See response to question 6. on the Research and Related Other Project Information Form).	Yes_ No_ <u>X</u>